

IEEE 802.16d 5G Outdoor WiMAX Base Emulator

Maksat Mini BS fully complies with IEEE 802.16-2004 standard, and is fully integrated MAC/PHY mixed baseband processor for Broadband Wireless Access. WiMAX is a standards-based wireless technology that provides high-throughput broadband connections over long distances and LOS/NLOS environment up to 15-20km.

WiMAX can be used for a number of applications, including "last mile" broadband connections, broadband wireless service and high-speed backhaul, enterprise connectivity.

Features

- IEEE 802.16d-2004 compliant
- Support Channel Bandwidth 3.5,5,7,10MHz
- Support PTP,PMP
- Adaptive Power Control
- Auto Rx Gain Control
- Support Qos UGS, rtPS, nrtPS and BE
- Support Service Classes
- Support Service Flow Classification
- Support ARQ
- Support Up-Link Sub-channelization in SS
- Support Up-Link / DL-Link Ratio resource adjustment
- DHCP Server/ Client Protocol
- Power over Ethernet DC supply
- Supports web site firmware upgrade, remote and local web management.
- Support VLAN Tag
- Support SNMP
- RoHS Compliance



Radio Technical Specifications

System Information											
Processor	Atheros AR7130 (300MHz) Networking Processor										
Memory	32MB										
Flash	8M										
Interface	Wireless: 802.16d MiniPCI card WAN: One 10/100 Base Ethernet Port (with Auto MDI/ MDIX) Button: Load default reset button										
Radio Specification											
Radio Processor	Paradom 1620										
Radio Transceiver	MAX2828										
Frequency Range	4.9GHz to 5.875GHz										
FFT	256										
Duplexing	TDD										
Adaptive Modulation	BPSK,QPSK,16QAM,64QAM										
Frame Duration	2.5, 4, 5, 8, 10, 12.5, 20ms										
Channel Bandwidth	3.5, 5, 7,10MHz /1.75, 2.5, 3, 6,MHz (Option)										
Cyclic Prefix	1/4, 1/8, 1/16, 1/32										
QoS	UGS / rtPS / nrtPS / BE										
ARQ	ARQ procedure Feedback										
Antenna diversity	STC mode Antenna switch for Rx										
Antenna	17dBi Patch Antenna										
Output Power	17dBm typical										
Receiver Sensitivity Receiver Sensitivity @ BER 10e-6,3.5MHz and 7MHz	<table border="0"> <tr> <td>3.5MHz</td> <td>7MHz</td> </tr> <tr> <td>BPSK: -96dBm</td> <td>BPSK: -93dBm</td> </tr> <tr> <td>QPSK: -91dBm</td> <td>QPSK: -88dBm</td> </tr> <tr> <td>16QAM: -85dBm</td> <td>16QAM: -82dBm</td> </tr> <tr> <td>64QAM: -78dBm</td> <td>64QAM: -75dBm</td> </tr> </table>	3.5MHz	7MHz	BPSK: -96dBm	BPSK: -93dBm	QPSK: -91dBm	QPSK: -88dBm	16QAM: -85dBm	16QAM: -82dBm	64QAM: -78dBm	64QAM: -75dBm
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Software Information

Wireless Feature	<ul style="list-style-type: none"> ● Frequency Select ● Channel Size Select ● Guard Interval Select ● Adaptive Power Control ● Up-Link Sub-channelization in SS ● ARQ ● Service Classes ● Service Flow Classification ● Cell Range adjustment ● Auto Rx Gain Control
Network Feature	<ul style="list-style-type: none"> ● Support DHCP Server ● Support NAT ● Support VLAN tag (Not Ready) ● Support Static IP ● Support FTP Server ● Support <u>PPPoE</u> Client ● Support QoS
Security Feature	<ul style="list-style-type: none"> ● RSA-Based ● AES (CCM/CBC/ CTR)-HW engine ● DES-HW engine ● PKM v1
Management Feature	<ul style="list-style-type: none"> ● Support NTP function ● Support temperature monitor ● Support SS Status Monitor ● Support SNMP V2 (Not ready) ● Support load factory default ● Support backup and restore UI settings

Power & Environmental Information

DC Jack Input	Range 12V ~ 18V @2A (DC Voltage)
<u>PoE</u>	Passive <u>PoE</u> (range: 12-18V DC) Input WAN Port Passive PoE Input
Power Consumption	15W Max
Operation Temperature	-40°C to +85°C
Storage Temperature	-60°C to +150°C
Water Proof	IP67
Humidity	TBD
Weight	TBD